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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/505,803	02/17/2000	James E Arnold	RA6-021400	7268

7590

07/07/2003

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EXAMINER

COMPTON, ERIC B

ART UNIT	PAPER NUMBER
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3726

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DATE MAILED: 07/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.

09/505,803

Applicant(s)

ARNOLD, JAMES E

Examiner

Eric B. Compton

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--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 18 June 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☒ The period for reply expires 4 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ they raise the issue of new matter (see Note below);
- (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____.

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: <see Office Action>.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____.

Claim(s) objected to: _____.

Claim(s) rejected: 17-23 25-36.

Claim(s) withdrawn from consideration: _____.

8. ☐ The proposed drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____.
10. ☐ Other: _____.

DETAILED ACTION

1. Applicant's arguments filed June 16, 2003, have been fully considered but they are not persuasive. Applicant argues primarily that Liburdi does not disclose coating a cutting edge. The Final Rejection, Paper No. 18, rejected claims 17-23 and 25-36 as being unpatentable over AAPA in view of Liburdi. Applicant's response has attempted to attack the references individually, pointing out the shortcoming of each reference, individual, rather than addressing what the references as a whole suggest to a skilled artisan. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Furthermore, the test for obviousness is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

The rejection initially set forth the teachings of AAPA, and further explained them with the teachings of Liburdi. Note: Liburdi was discussed by AAPA. Specification, page 10, line 1. Applicant's response seems to suggest that the Examiner made the rejection perhaps based on modifying the teachings of Liburdi in light of AAPA. Notwithstanding this point, the Examiner will address the issue that he believes Applicant intended, mainly a lack of motivation.

Applicant notes in the response, pages 10-11, that AAPA disclosed coating cutting tools, yet, "the tool bit is likely to fail at the relatively brittle brazed interface

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between the metal cutting tip and the tool substrate.” Applicant’s invention seeks to apply a diffusion bond to prevent this drawback. “The diffusion bond does not have the interface boundary which is usually the site of failure. The diffusion bond is created by subjecting the coated workpiece to a hot isostatic pressing (HIP) treatment.”

Specification, page 55, lines 6-10. AAPA disclosed coating a substrate with a metallic overlay and a high temperature corrosion resistant outer layer, and “subjected [it] to a HIP treatment to eliminate porosity and creates an inter-diffusion between the outer layer, the overlay, and the substrate.” Specification, page 15, lines 6-10 (discussing Gupta reference). Thus, AAPA recognizes that it is known in the art to perform a HIP treatment in order to diffusion bond the coating material to the workpiece substrate.

Applicant notes the cutting edge such as a knife blade requires a sharpening process.

See Specification, page 58, lines 6-7 (suggesting invention alleviates or eliminates need to sharpening knives). However, nothing in AAPA noted that a coating subjected to this process is capable of withstanding an edge sharpening process. The Examiner pointed this in the Final Rejection, page 3, second to last paragraph. Therefore, the only remaining issue is whether the coating applied by the process, including a HIP treatment as taught and suggest by AAPA, may be sharpened, and whether there is motivation to do so.

Applicant’s conclusion that “The grinding process is not analogous to an edge sharpening process, in the teaching of Liburdi [, since] there is no sharpening and there is no edge.” on page 9 of the response is not convincing. The sharpening process, as claimed by Applicant of a cutting edge, e.g., a knife blade, undeniably requires a

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grinding process. See generally U.S. Patent 3,680,264 to Dewitt; U.S. Patent 3,889,425 to Miyamoto; U.S. Patent 4,672,777 to Dunkin. Applicant is correct in that Liburdi does not specifically disclose a cutting edge for a cutting tool; yet in Example 7, explicitly disclosed that the tip of a turbine blade is ground after the coating/repairing process to final dimension. Furthermore, Liburdi explicitly disclosed that the outer edge of the product (e.g., a turbine blade) fabrication or repair, formed essentially by the process disclosed by AAPA, is subjected to a grinding process after the sintering and HIP processes to assume its final dimensions. See page 4, lines 65-66, Examples 5, 7, 8, 9 and 11. As previously pointed out in the Final Rejection, page 4, last paragraph, there is no suggestion that blade is detrimentally affected by the grinding process. Like a cutting tool or knife blade that must be sharpening to precise dimension, so must the turbine blade of Liburdi. Col. 8, lines 1-7. The process also provides increased wear resistance just as Applicant's invention does.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have performed an edge-sharpening step (e.g., a grinding step) after the coating step of AAPA, in light of the teachings of Liburdi, in order to form a product having a well defined edge portion.

Thus, the Examine has made a proper prima facie showing.

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Contact Information


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric B. Compton whose telephone number is (703) 305-0240. The examiner can normally be reached on M-F, 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory M. Vidovich can be reached on (703) 308-1513. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.

ebc

July 3, 2003


GREGORY VIDOVICH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700